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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,538	04/23/2001	Koichi Nagaki	PU01-0167	2125

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EXAMINER

WONG, KIN C

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 10/27/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,538

Applicant(s)

NAGAKI ET AL.

Examiner

K. Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Objections

The examiner is objecting to the claims because the claims are numbered in an inconsistency order.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "power supply in the vehicle," vehicle, tachometer, vibration sensor, sound sensor, speed sensor, gyro sensor, parking brake sensor, generator sensor, starter-motor sensor and the engine must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings filed on 7/18/03 have been approved by the draftsman.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims (1-22) are rejected under 35 U.S.C. 102(e) as being anticipated by Smith et al (6546456).

Regarding claim 1: Smith et al discloses a disk drive device (as depicted in figure 3 of Smith et al) for recording and/or reproducing information to and/or from an information recording disk and driven by a power supply voltage (element 112 in figure 1) in a vehicle (element 110 in figure 1), including an engine start detecting part for detecting an engine start of the vehicle (element 100 where Smith et al describes the control for the vehicle which including the ignition – see col. 5, lines 25-44), the disk drive device being driven after the engine start detecting part detects an engine start of the vehicle (see col. 5, lines 45-67 where Smith et al describes the controls for the disk drive after the vehicle has started).

Regarding claim 2: Smith et al discloses a disk drive device (element 103 in figure 3) for recording and/or reproducing information to and/or from an information recording disk and driven by a power supply voltage (element 112 – see col. 6, lines 1-3 of Smith et al) in a vehicle, including:

a head (element 310 in figure 3) for reading and/or writing information from and/or to the information recording disk (see col. 7, lines 34-38 of Smith et al);

a head driving part (element 305 in figure 3) for giving a driving instruction to the head (see col. 6, lines 20-24 of Smith et al);

an engine start detecting part for detecting an engine start of the vehicle (see col. 5, lines 25-32 of Smith et al); and

a head movement allowing part for allowing the head to be moved by the head driving part after an engine start of the vehicle is detected by the engine start detecting part (see col. 5, lines 25-67 of Smith et al).

Regarding claim 3: the limitations of a forcible moving part for forcibly moving the head to a retreat position when the power supply voltage in the vehicle is interrupted are considered an inherent function of the disk drive when power interrupted or below a predetermined power level (i.e., power failure) – see col. 13, lines 7-17 of Smith et al.

Regarding claim 4: the limitations of wherein the forcible moving part forcibly moves the head to the retreat position by providing the head driving part with counter electromotive force generated by the inertial rotation of a spindle motor driving the recording disk to rotate are considered inherent because it is an inherent knowledge of an artisan in the art that during the retraction of the head, the retraction functions in a disk drive using the counter electromotive force (back-EMF) of the spindle motor to generate the power for the head retraction when power failure occurs.

Regarding claim 5: the limitations of a voltage value monitoring circuit for monitoring voltage values (a voltage monitor or detector is considered inherent because Smith et al discloses various sensors for various parameters which including the power status of the vehicle) on a first power supply line provided with a backup power supply and a second power supply line provided with a power supply when an engine key (see col. 8, lines 45-61 where Smith et al describes the operation of the disk drive with the corresponding states of the vehicle ignition switch) is inserted and turned from a first position to a second position, the engine start detecting part outputting an engine start

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detection signal when the voltage value on the second power supply line reaches a prescribed value, and then the value on the first power supply line or the values on the first power supply line and the second power supply line become lower than the prescribed value and then higher than the prescribed value, based on an output value from the voltage value monitoring circuit. Thus, the limitations are considered satisfied.

Regarding claim 6: the limitations of a voltage value monitoring circuit for monitoring a voltage value on a third power supply line provided with a power supply when an engine key is turned from the second position to a third position, and a voltage value on a fourth power supply line provided with a power supply when the engine key is turned from said third position to a fourth position, the engine start detecting part outputting an engine start detection signal when the voltage value on the second power supply line or the third power supply line reaches a prescribed value, and then the voltage value on the first power supply line or the voltage values on the first power supply line and the second power supply line become lower than the prescribed value and then higher than the prescribed value, based on an output value from the voltage value monitoring circuit are considered inherent for the reason as noted in the discussions of claim 5 in respect to the third power line (or source).

Regarding claim 7: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing an output of an engine tachometer are considered inherent because Smith et al discloses various sensors for sensing the engine in col. 5, lines 27-32.

Regarding claims 8 and 9: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing vibration (or sound or noise) of the engine inside and outside the vehicle are considered inherent because Smith et al discloses various sensors for sensing the engine in col. 5, lines 27-32 and col. 8, lines 45-61.

Regarding claim 10: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing traveling of the vehicle based on a vehicle speed pulse are considered inherent because Smith discloses various sensors for various sensing of the engine (or vehicle) in col. 5, lines 27-32 and col. 8, lines 45-61.

Regarding claim 11: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing traveling of the vehicle using a gyro sensor are considered inherent because Smith et al discloses various sensors for sensing the engine (or vehicle) in col. 5, lines 27-32 and col. 8, lines 45-61.

Regarding claim 12: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing an operation position of a parking brake are considered inherent because Smith et al discloses various sensors for sensing the engine (or vehicle) in col. 5, lines 27-32 and col. 8, lines 45-61.

Regarding claim 13: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing operation of a

generator in the vehicle are considered inherent because Smith et al discloses various sensors for sensing the engine in col. 5, lines 27-32 and col. 8, lines 45-61.

Regarding claim 14: the limitations of wherein the engine start detecting part outputs a signal representing an operation state of the engine by sensing activation of a starter-motor are considered inherent because Smith et al discloses various sensors for sensing the engine in col. 5, lines 27-32 and col. 8, lines 45-61.

Regarding claim 15: the limitations of wherein information on a previous off state of the engine is backed up in a memory (see col. 7, line 63 to col. 8, line 19 and col. 8, lines 45-61 of Smith et al), and the information is displayed on a screen in response to detection of a power supply being provided to the second power supply line are considered inherent because Smith discloses an Interactive Control task in a multimedia system which including a screen displays for various information and tasks in col. 8, lines 12-36.

Regarding claim 16: Smith et al discloses a disk drive device driven by a power supply voltage in a vehicle, including:

a counter (timer) for starting counting operation based on a prescribed signal related to a key switch in the vehicle; and

a controller for driving the disk drive device when the counter has counted a first prescribed time period (see col. 10, lines 19-33, and, figures 4a and 4b of Smith).

Regarding claims 17-22: claims (17-22) have limitations similar to those treated in the above rejections in claims (2-4 and 16), and are met by the reference as discussed above. Claim 17 however also recites the following limitations of counter

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(timer) in respective operation of the disk drive and the vehicle that are disclosed in col. 10, lines 19-33 of Smith et al and the discussion in the above rejections.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Beckert et al (5794164), Sonoda et al (6236918) and Wong et al (6434459) are cited for vehicle electronic apparatus control. Patton, III is cited for disk drive retraction control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Wong whose telephone number is (703) 305-7772.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Hudspeth can be reached on (703) 308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

kw

20 Oct 03



DAVID HUDSPETH
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